

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: JAMES POND	Lake Area (ha):	4.05
Town: TAMWORTH	Maximum depth (m):	2.8
County: Carroll	Mean depth (m):	1.5
River Basin: Saco	Volume (m <sup>3</sup> ):	62000
Latitude: 43°54'35" N	Relative depth:	1.2
Longitude: 71°16'20" W	Shore configuration:	1.25
Elevation (ft): 896	Areal water load (m/yr):	3.13
Shore length (m): 890	Flushing rate (yr <sup>-1</sup> ):	2.00
Watershed area (ha): 21.8	P retention coeff.:	0.74
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

		1 February 1996	19 June 1995
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	MALLOMONAS 97%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.58
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 99%	TRICHOCERCA 33%
	#2		KERATELLA 21%
	#3		BOSMINA 18%
ROTIFERS/LITER		263	171
MICROCRUSTACEA/LITER		<1	109
ZOOPLANKTON ABUNDANCE (#/L)		265	280
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			1.8
BOTTOM DISSOLVED OXYGEN (mg/L)		2.3	3.7
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: JAMES POND

Town: TAMWORTH

	1 February 1996		19 June 1995		
DEPTH (m)	1.5		1.5		
pH (units)	5.0		6.0		
A.N.C. (Alkalinity)	0.2		0.9		
NITRATE NITROGEN	0.09		< 0.10		
TOTAL KJELDAHL NITROGEN	0.49		0.40		
TOTAL PHOSPHORUS	0.020		0.017		
CONDUCTIVITY ( $\mu$ mhos/cm)	21.4		13.8		
APPARENT COLOR (cpu)	60		37		
MAGNESIUM			0.16		
CALCIUM			1.0		
SODIUM			1.2		
POTASSIUM					
CHLORIDE	< 2		2		
SULFATE			2		
TN : TP	29		24		
CALCITE SATURATION INDEX			5.3		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1995**

D.O. S.D. PLANT CHL TOTAL CLASS

**	4	1	1	6	Meso.
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**COMMENTS:**

1. This is a remote pond surveyed jointly with the Fish and Game Department. It is relatively acidic, particularly in the winter, with very little buffering capacity (ANC). It has lightly tea-colored water with only fair water clarity (6 feet). It has one of the lowest conductivities of any pond in the state.

# James Pond Tamworth



launch

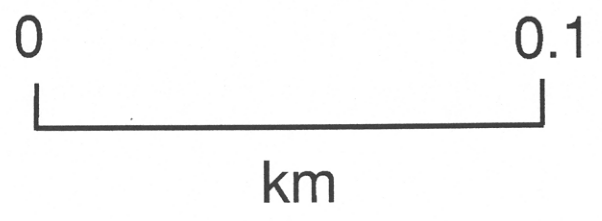
5

0  
rocks

\*  
9'

5

5 foot depth contour



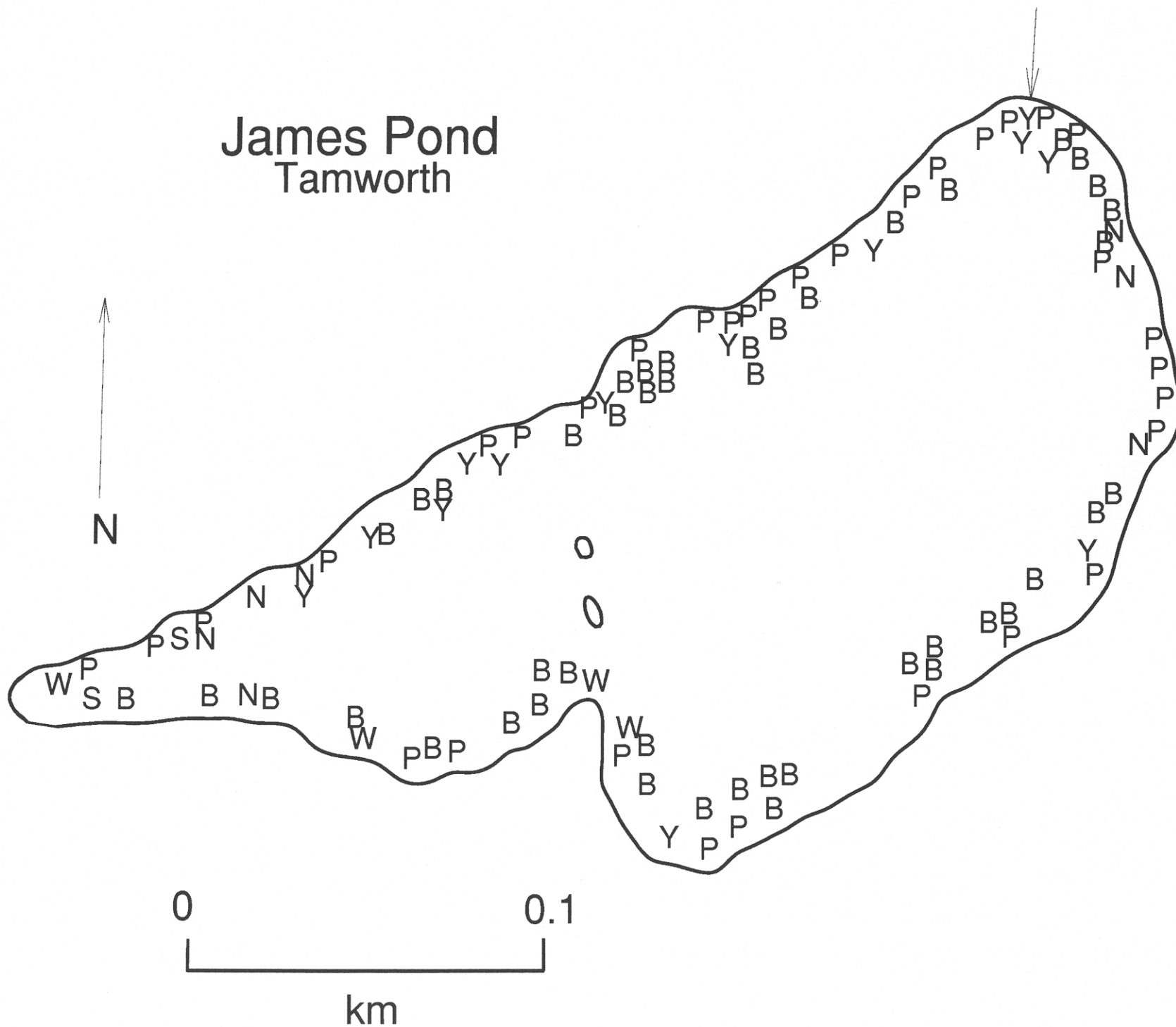
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COMMENTS :

\*Dissolved oxygen values are in mg/L

# James Pond Tamworth

111 - 120



AQUATIC PLANT SURVEY

LAKE: JAMES POND TOWN: TAMWORTH DATE: 06/19/95

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[illegible]

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Due to poor water clarity the bottom was generally not visible and bottom growth was not evaluated. A fragment of bladderwort was seen floating, and this plant may be over much of the bottom.
2. At least two different species of pondweed were present.
3. Two broods of Canada geese were on the pond.